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(FILE 'HOME' ENTERED AT 08:14:07 ON 07 JUN 2007)
FILE 'CA' ENTERED AT 08:14:22 ON 07 JUN 2007

L1 388106 S (TEMPERATURE OR HEMATOCRIT OR HAEMATOCRIT OR HCT OR HEAMATOCRIT) (5A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST? OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE# OR PROBING OR QUANTITAT? OR QUANTIFI?)

L2 13684 S L1 AND(ELECTRODE OR MINIELECTRODE OR MICROELECTRODE OR NANOELECTRODE OR AMPEROMET? OR COULOMET? OR ELECTROCHEMICAL)

L3 115856 S (GLUCOSE OR SUGAR OR ANALYTE OR (MEDICAL? OR BIOLOGICAL?)(2A) COMPONENT)(5A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST? OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE# OR PROBING OR QUANTITAT? OR QUANTIFI?)

L4 9645 S L3 AND(ELECTRODE OR MINIELECTRODE OR MICROELECTRODE OR NANOELECTRODE OR AMPEROMET? OR COULOMET? OR ELECTROCHEMICAL)

L5 907 S L1(10A)(IMPEDANCE OR IMPEDENCE OR ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)

L6 109 S L3(10A)(IMPEDANCE OR IMPEDENCE OR ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)

L7 1553 S L1 AND(IMPEDANCE OR IMPEDENCE OR ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)(6A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST? OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE# OR PROBING OR QUANTITAT? OR QUANTIFI?)

L8 251 S L3 AND(IMPEDANCE OR IMPEDENCE OR ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)(6A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST? OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE# OR PROBING OR QUANTITAT? OR QUANTIFI?)

L9 275 S L2 AND L4

L10 21 S L5,L7 AND L6,L8

L11 107110 S AC OR (ALTERNATING OR OSCILLATING OR OSCILATING)(2A)(INPUT OR SIGNAL OR CURRENT)

L12 2 S L9 AND L11

L13 323711 S (TEMPERATURE OR HEMATOCRIT OR HAEMATOCRIT OR HCT)(5A)(CORRECT? OR INTERFER? OR ADJUST? OR EFFECT?)

L14 49 S L9 AND L13

L15 124 S L4 AND L13

L16 145 S L10,L12,L14-15

L17 92 S L16 AND PY<2004

L18 19 S L16 NOT L17 AND PATENT/DT

FILE 'BIOSIS' ENTERED AT 09:18:48 ON 07 JUN 2007

L19 23 S L17

FILE 'MEDLINE' ENTERED AT 09:20:39 ON 07 JUN 2007

L20 13 S L17

FILE 'CA' ENTERED AT 09:22:26 ON 07 JUN 2007

L21 1603 S L1,L3 AND(IMPEDANCE OR IMPEDENCE)(6A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST? OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE# OR PROBING OR QUANTITAT? OR QUANTIFI?)

L22 193 S L1,L3 AND(ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)(6A)(DETECT? OR DETERMIN? OR ANALY? OR ASSAY? OR MEASUR? OR MONITOR? OR TEST?

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            OR EVALUAT? OR ESTIMAT? OR SENSE# OR SENSING OR SENSOR OR PROBE#
            OR PROBING OR QUANTITAT? OR QUANTIFI?)
L23     13 S L21 AND L22
L24    154 S L21,L22 AND L13
L25     18 S L24 AND(BIO? OR BLOOD OR URINE OR SWEAT OR SALIVA)
L26     12 S L22 AND(BIO? OR BLOOD OR URINE OR SWEAT OR SALIVA)
L27    902 S L1,L3(10A)(IMPEDANCE OR IMPEDENCE)
L28    111 S L1,L3(10A)(ADMITTANCE OR ADMITANCE OR PHASE(1A)ANGLE)
L29      3 S L27 AND L28
L30     92 S L27-28 AND L13
L31      6 S L30 AND(BIO? OR BLOOD OR URINE OR SWEAT OR SALIVA)
L32      6 S L28 AND(BIO? OR BLOOD OR URINE OR SWEAT OR SALIVA)
L33     44 S L23,L25-26,L29,L31-32
L34     34 S L33 AND PY<2004
L35      3 S L33 NOT L34 AND PATENT/DT
     FILE 'BIOSIS' ENTERED AT 09:40:03 ON 07 JUN 2007
L36     32 S L34
     FILE 'MEDLINE' ENTERED AT 09:44:26 ON 07 JUN 2007
L37     23 S L34
     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 09:53:47 ON 07 JUN 2007
L38    193 DUP REM L17 L18 L34 L35 L19 L36 L20 L37 (46 DUPLICATES REMOVED)

=> d bib,ab,kwic 1-193 l38

L38  ANSWER 19 OF 193  CA  COPYRIGHT 2007 ACS on STN
AN   141:153477  CA
TI   System and method for determining a temperature during analyte
     measurement
IN   Burke, David W.; Kuhn, Lance S.; Beaty, Terry A.; Svetnik, Vladimir
PA   USA
SO   U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of U.S. Ser. No. 264,890.
PI   US 2004157338        A1    20040812    US 2003-687668         20031017
     US 6645368           B1    20031111    US 2000-530171         20000424
     US 2003064525        A1    20030403    US 2002-264890         20021004
     US 2004005716        A9    20040108
PRAI US 1997-996280       B2    19971222
AB   A method of measuring an analyte in a biol. fluid comprises applying an
     excitation signal having a DC component and an AC component.  The AC and
     DC responses are measured; a cor. DC response is detd. using the AC
     response; and a concn. of the analyte is detd. based upon the cor. DC
     response.  Other methods and devices are disclosed.

L38  ANSWER 20 OF 193  CA  COPYRIGHT 2007 ACS on STN
AN   141:153486  CA
TI   System and method for analyte measurement using ac phase angle
     measurements
IN   Burke, David W.; Kuhn, Lance S.; Beaty, Terry A.; Svetnik, Vladimir
PA   USA
SO   U.S. Pat. Appl. Publ., 56 pp., Cont.-in-part of U.S. Ser. No. 264,890.
PI   US 2004157337        A1    20040812    US 2003-688312         20031017
PRAI US 1997-996280       B2    19971222
AB   A method of measuring an analyte in a biol. fluid comprises applying an
     excitation signal having a DC component and an AC component.  The AC and
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DC responses are measured; a cor. DC response is detd. using the AC response; and a concn. of the **analyte** is **detd.** based upon the cor. DC response. Other methods and devices are disclosed.

L38 ANSWER 21 OF 193 CA COPYRIGHT 2007 ACS on STN
AN 140:213554 CA
TI Method of **determining** a **haematocrit corrected glucose** concentration in whole blood samples wherein the **haematocrit** concentration is **measured** by **impedance** spectroscopy
IN Vreeke, Mark S.; Genshaw, Marvin A.; Melle, Bryan S.
PA Bayer Healthcare, LLC, USA
SO Eur. Pat. Appl., 16 pp.

PI	EP 1394545	A1	20040303	EP 2003-18656	20030821
	US 2004079652	A1	20040429	US 2003-645785	20030822
PRAI	US 2002-406066P	P	20020827		

AB Method of **detg.** the **glucose** concn. in a whole blood sample by providing an **electrochem. sensor** adapted to **measure glucose** and **hematocrit** concns. The hematocrit concn. of the whole blood sample is **measured** using the **electrochem. sensor** via **electrochem. impedance** spectroscopy. The initial glucose concn. of the whole blood sample is measured using the **electrochem.** sensor. The unbiased glucose concn. in the whole blood sample is calcd. using the initial **glucose** concn. **measurement** and the **hematocrit** concn.

L38 ANSWER 49 OF 193 CA COPYRIGHT 2007 ACS on STN
AN 135:134276 CA
TI **Electrochemical** methods and devices for use in the **determination** of **hematocrit corrected analyte** concentrations
IN Ohara, Timothy J.; Kermani, Mahyar Z.
PA Lifescan, Inc., USA
SO PCT Int. Appl., 20 pp.

PI	**WO 2001057510**	**A2**	**20010809**	**WO 2001-US2465**	**20010125**
	US 6475372	**B1**	**20021105**	**US 2000-497304**	**20000202**
	US 6890421	B2	20050510		
PRAI	US 2000-497304	A	20000202		

AB Methods and devices for **detg.** the concn. of an **analyte** in a physiol. sample are provided. In the subject methods, the physiol. sample is introduced into an **electrochem.** cell having a working and ref. **electrode.** A first elec. potential is applied to the cell and the resultant cell current over a period of time is measured to det. a first time-current transient. A second elec. potential of opposite polarity is then applied and a second time-current transient is detd. The preliminary concn. of the analyte is then calcd. from the first and/or second time-current transient. This preliminary analyte concn. less a background value is then multiplied by a **hematocrit correction** factor to obtain the **analyte** concn. in the sample, where the **hematocrit correction** factor is a function of the preliminary analyte concn. and the variable γ of the **electrochem.** cell. The subject methods and devices are suited for use in the **detn.** of a wide variety of **analytes** in a wide variety of samples, and are particularly suited for the **detn.** of **analytes** in whole blood or derivs. thereof, where an **analyte** of particular interest is **glucose.**

L38 ANSWER 60 OF 193 CA COPYRIGHT 2007 ACS on STN
AN 134:14909 CA
TI Disposable enzyme **electrode** strip sensor and method of making
IN Winarta, Handani; Cai, Xiaohua; Seto, Fung; Young, Chung Chang
PA Nova Biomedical Corp., USA
SO PCT Int. Appl., 41 pp.

PI	**WO 2000073785**	**A2**	**20001207**	**WO 2000-US15413**	**20000531**
	US 6287451	**B1**	**20010911**	**US 1999-324443**	**19990602**
PRAI	US 1999-324443	A	19990602		

AB A disposable **electrode** strip for testing a fluid sample includes a laminated strip with a first and second end, a ref. **electrode** embedded in the laminated strip proximate to the first end, at least two working **electrodes** embedded in the laminated strip proximate to the first end and the ref. **electrode**, an open path for receiving a fluid sample beginning from the first end and being sufficiently long to expose the ref. **electrode** and the working **electrodes** to the fluid sample, and conductive contacts located at the second end of the laminated strip. The laminated strip has a base layer with a conductive coating, a reagent holding layer, a channel forming layer and a cover. One of the working **electrodes** contains a reagent substantially similar to the reagent of the ref. **electrode** and a second working **electrode** contains a reagent having an enzyme. A blood **glucose sensor** was prepd. that demonstrated **hematocrit** compensation and was free from **interference** from ascorbic acid, etc.

L38 ANSWER 89 OF 193 BIOSIS on STN
AN 1998:387164 BIOSIS
TI Investigation into the **effects** of **haematocrit** and **temperature** on the resistivity of mammalian **blood** using a four-electrode probe.
AU Tjin, S. C. [Reprint author]; Xie, T.; Lam, Y. Z.
CS Sch. Electrical Electronic Eng., Nanyang Technological University, Nanyang Ave., Singapore 639798, Singapore
SO Medical and Biological Engineering and Computing, (**July, 1998**) Vol. 36, No. 4, pp. 467-470.
AB **Hematocrit** and **temperature effects** on resistivity are investigated using the electrical impedance method. Measurements are made extensively for pig's **blood**. The experimental set-up basically involves four ring electrodes being placed around a wooden probe that is subsequently immersed into a syringe containing pig's **blood**. The syringe is then submerged in water maintained at a constant **temperature** while **measurements** are taken. The resistivity of **blood** is found to increase linearly by approximately 2.9% as the hematocrit level increases from 18% to 49% at a fixed temperature of 37degreeC. Furthermore, the resistivity is found to decrease linearly by approximately 22% with temperature increasing from 33degreeC to 42degreeC for all practical levels of hematocrit.

L38 ANSWER 90 OF 193 CA COPYRIGHT 2007 ACS on STN
AN 129:106084 CA
TI Functional characterization of a conducting polymer-based immunoassay system
AU Fare, T. L.; Cabelli, M. D.; Dallas, S. M.; Herzog, D. P.

CS Ohmicron Medical Diagnostics, Newtown, PA, 18940, USA
SO Biosensors & Bioelectronics (**1998**), 13(3-4), 459-470
AB Expts. have been performed to characterize the elec. properties and functionality of a poly(3-hexylthiophene)-coated platinum electrode developed as a sensor for immunoassay read-out. **Admittance measurements** were performed on the coated electrodes as a function of frequency. The **admittance** spectra obtained show that the **sensor** is capacitive in nature. A circuit model is presented for comparison to other conducting polymer systems. Dynamic sensor response is characterized by oxidizing the polymer via a hydrogen peroxide-iodide pathway. Hydrogen peroxide is introduced either by direct injection or through a **glucose-glucose** oxidase reaction to **det.** electrode functionality and sensitivity. Sensor response to chem. oxidn. is measured as a function of frequency and applied signal amplitude. System response is linear in frequency from 1 Hz to 70 Hz and in excitation amplitude up to approx. 600 mV. System sensitivity is analyzed based on oxidant generation from the enzyme-initiated pathway, sensor baseline drift, and the noise band on the quiescent sensor current.

L38 ANSWER 96 OF 193 CA COPYRIGHT 2007 ACS on STN
AN 126:301244 CA
TI Sinusoidal Voltammetry for the Analysis of Carbohydrates at Copper **Electrodes**
AU Singhal, Pankaj; Kawagoe, Kirk T.; Christian, Clifford N.; Kuhr, Werner G.
CS Department of Chemistry, University of California, Riverside, CA, 92521, USA
SO Analytical Chemistry (**1997**), 69(8), 1662-1668
AB A digital approach for the collection and anal. of **electrochem.** frequency domain spectra is presented for the oxidn. of carbohydrates at a copper **electrode** using a continuous, large-amplitude sine wave as an excitation waveform. The background charging current response is a phase-shifted sine wave with the major frequency component concd. at the fundamental frequency. A nonlinear faradaic response due to the oxidn. of sugars produces significant signal intensities at the higher harmonics as well as the fundamental frequency. Examn. of the frequency spectra of glucose and maltose leads to selective and sensitive **detection** of these **sugars** at a copper **electrode**. The selectivity of this measurement relies on the inherent difference in the frequency domain spectra (i.e., magnitude and phase of each harmonic) of sugars of different sizes. This frequency distribution is dramatically affected by **temp.**, indicating the **effect** of kinetics in the mechanism for the oxidn. of sugars. The sensitivity of the **measurement** of **glucose** and maltose is demonstrated with flow injection anal. and post-processing the data with the digital equiv. of a lock-in amplifier. A limit of detection of 8 nM is obtained for glucose when the isolated faradaic current is optimized for phase and frequency.

L38 ANSWER 129 OF 193 BIOSIS on STN
AN 1994:478979 BIOSIS
TI Electrical **admittance** cuff for non-invasive and simultaneous **measurement** of **haematocrit**, arterial pressure and elasticity using volume-oscillometric method.

AU Yamakoshi, Ken-Ichi [Reprint author]; Tanaka, S.; Shimazu, H.
CS Res. Inst. Electronic Sci., Hokkaido Univ., W6N12 Kita-ku, Sapporo 060, Japan
SO Medical and Biological Engineering and Computing, (**1994**) Vol. 32, No. SUPPL., pp. S99-S107.
AB An improved technique based on the electrical **admittance** cuff was designed for the non-invasive **measurement** of **haematocrit** (**Hct**), together with **blood** pressure (BP) and arterial elasticity represented as volume elastic modulus human fingers. This device is made of a rigid annular chamber installed with a surrounding thin-walled tube (cuff), which is filled with electrolyte solution. A tetrapolar method is used to **detect** the **admittance** signals, both in the solution and in a finger segment placed through the cuff. With this device, it is theoretically shown that the resistivity of **blood** flowing into the segment is equal to that of the solution multiplied by the ratio of the admittance variation in the solution to that in the segment. Thus, the **blood** resistivity and therefore **Hct** can be non-invasively **determined** from the electrolyte resistivity and these two **admittance** variations. On the other hand, BP and E, are also simultaneously **measured** from the **admittance** signals following the gradual change of the chamber pressure based on the volume-oscillometric method. Experiments were successfully made in 14 subjects, showing that the indirect Hct values agreed well with the direct values obtained from sampled **blood** and that this simple technique; was significant for the non-invasive ad simultaneous measurement of these physiological variables.

L38 ANSWER 134 OF 193 BIOSIS on STN
AN 1994:28971 BIOSIS
TI Implications of the dielectrical behavior of human **blood** for continuous online **measurement** of **haematocrit**.
AU De Vries, P. M. J. M. [Reprint author]; Langendijk, J. W. G.; Kouw, P. M.; Visser, V.; Schneider, H.
CS Dep. Interanl Med., Free Univ. Hosp., P.O. Box 7057, 1007 MB Amsterdam, Netherlands
SO Medical and Biological Engineering and Computing, (**1993**) Vol. 31, No. 5, pp. 445-448.
AB A study was designed to explore the possibility of **detecting** the **haematocrit** of **blood** by means of **admittance measurements**. The admittance and **phase angle** of **blood** kept in a **measuring** cell were determined at various frequencies between 60 kHz and 24 MHz. A reliable and accurate **estimation** of **haematocrit** was obtained in two ways. First, low-frequency admittance, high-frequency admittance and a factor x, which was the conductive percentage of cell content, were used. Secondly, the maximum phase angle was used. Both methods can be applied to obtain continuous on-line information about haematocrit for **blood** volume control during haemodialysis.

L38 ANSWER 176 OF 193 BIOSIS on STN
AN 1987:127975 BIOSIS
TI COMPLETELY IMPLANTABLE HYPERTHERMIA APPLICATOR WITH EXTERNALIZED TEMPERATURE MONITORING TESTS IN CONDUCTIVE GEL.
AU DOSS J D [Reprint author]; MCCABE C W
CS LOS ALAMOS NATIONAL LAB, LOS ALAMOS, NM 87545, USA

SO Medical Physics (Woodbury), (**1986**) Vol. 13, No. 6, pp. 876-881.
AB Development is underway on a hyperthermia applicator intended for complete implantation and long-term use. Radio frequency energy is transmitted from an external antenna to a closely coupled subdermal antenna. This internal antenna is connected via a transmission line to deeply implanted electrodes. Changes in temperature at the electrodes result in a change in tissue resistivity which modifies the complex impedance seen at the external antenna terminals. This variation in antenna impedance (magnitude and/or **phase angle**) can, in principle, be utilized to indirectly **monitor** and regulate tissue **temperature** at the electrode location. Test results from conductive-gel tissue phantom experiments are presented.

L38 ANSWER 187 OF 193 MEDLINE on STN
AN 80136027 MEDLINE
TI Noninvasive **measurement** of **hematocrit** by electrical **admittance** plethysmography technique.
AU Yamakoshi K I; Shimazu H; Togawa T; Fukuoka M; Ito H
SO IEEE transactions on bio-medical engineering, **(1980 Mar)** Vol. 27, No. 3, pp. 156-61.

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STN INTERNATIONAL LOGOFF AT 09:55:49 ON 07 JUN 2007